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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,442	11/07/2005	Atsushi Yoshizawa	041514-5396	8793
55694 7590 05/17/2007 DRINKER BIDDLE & REATH (DC) 1500 K STREET, N.W. SUITE 1100 WASHINGTON, DC 20005-1209			EXAMINER HO, ANTHONY	
			ART UNIT 2815	PAPER NUMBER
			MAIL DATE 05/17/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/521,442

Applicant(s)

YOSHIZAWA, ATSUSHI

Examiner

Anthony Ho

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2007. ms
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 3 and 6-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4 and 5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 November 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/19/2006, 4/9/2007</u> .                                    | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election without traverse of Group 1, claims 1-6 and Species I, where claims 1-2 and 4-5 are readable on the elected species, in the reply filed on April 9, 2007 is acknowledged.

Accordingly, claims 3 and 6-14 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention and/or species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on April 9, 2007.

### ***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

The information disclosure statement (IDS) submitted on October 19, 2006 was filed after the mailing date of the instant application on November 7, 2005. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

The information disclosure statement (IDS) submitted on April 9, 2007 was filed after the mailing date of the instant application on November 7, 2005. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

***Drawings***

Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

The disclosure is objected to because of the following informalities: Please claim priority at the beginning of the application.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2 and 4-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Marks et al (US PUB 2002/0053666).

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In re claim 1, Marks et al discloses an organic semiconductor device comprising: a source electrode (18); a drain electrode (16); and a p-type organic semiconductor layer (12) sandwiched between the source electrode and the drain electrode, characterized by further comprising an n-type organic semiconductor layer (10) formed in an intermediate portion of the p-type organic semiconductor layer; and a gate electrode (14) embedded in the n-type organic semiconductor layer (Figure 8; paragraph 0066).

In re claim 4, Marks et al discloses an organic semiconductor device comprising: a source electrode (18); a drain electrode (16); and a n-type organic semiconductor layer (12) sandwiched between the source electrode and the drain electrode, characterized by further comprising a p-type organic semiconductor layer (10) formed in an intermediate portion of said n-type organic semiconductor layer and a gate electrode (14) embedded in said p-type organic semiconductor layer (Figure 8; paragraph 0066).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marks et al (US PUB 2002/0053666) as applied to claims 1 and 4 above, and further in view of Kudo et al, "Schottky gate static induction transistor using copper phthalocyanine films," Thin Solid Films, 331 (1998) 51-54.

Kudo et al discloses the gate electrode (G) has a flat plate shape (Figure 2).

The advantage is to obtain high power and high frequency operation in organic transistors (Abstract).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the organic semiconductor device as taught by Marks et al with the gate electrode has a flat plate shape as taught by Kudo et al in order to obtain high power and high frequency operation in organic transistors.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Baldo et al (US PUB 2003/0015698) discloses organic triodes with novel grid structures and method of production. Toguchi et al (US PUB 2003/0111692) discloses organic thin film transistor. Parthasarathy et al (US Patent 6,420,031) discloses highly transparent non-metallic cathodes. Jones et al (US Patent 6,337,492) discloses serially-connected organic light emitting diode stack having conductors sandwiching each light emitting layer. Tsutsui (US PUB 2003/0218166) discloses organic field effect transistor. Burrows et al (US Patent 5,917,280) discloses stacked organic light emitting

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devices. Miyata et al (US Patent 4,699,804) discloses process for producing electrically conductive composite polymer article.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Ho whose telephone number is 571-270-1432. The examiner can normally be reached on M-Th: 8:30AM-7:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Parker can be reached on 571-272-2298. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
KENNETH PARKER  
SUPERVISORY PATENT EXAMINER

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May 7, 2007